

December 10, 2002

Ms. Jennifer Hutchinson  
Indiana Department of Environmental Management  
Office of Water Quality  
2525 North Shadeland Avenue  
Indianapolis, IN 46219

Dear Ms. Hutchinson:

**RE: Trail Creek Data Report**  
**ARN No. A305-1-01-276-1-0**  
**Triad Engineering Incorporated Project No. I023557**

The following is a summary of information (Task 5) collected to date by Triad Engineering Incorporated (Triad), Hydroqual, Inc., and TN & Associates, Inc. for development of an *E. coli* bacteria total maximum daily load (TMDL) in the Trail Creek watershed located in LaPorte County, Indiana. A brief discussion is also included regarding acceptability of the *E. coli* data (Task 6), and data suitability and the temporal/geographic extent of *E. coli* in Trail Creek (Task 7) per the Supplement to Master Agreement for Technical Services between Triad and the Indiana Department of Environmental Management (IDEM).

The data and/or sources are listed under the major heading most closely associated with the information. The headings are also similar to those listed in Section 5 of the Trail Creek proposal. A portion of the information described below is also found on CDs, which contain other data as listed in Attachment A. Attachment B presents a list of Environmental Protection Agency's (EPA's) Storage and Retrieval System (STORET)/Permit Compliance System (PCS), United States Geological Survey (USGS), and Better Assessment Science Integrating Point and Nonpoint Sources (BASINS) information for the Trail Creek watershed. All pertinent electronic data will be assembled in Microsoft Access for use in the desktop geographic information system and mapping software ArcView, which provides data visualization, query, analysis, and integration along with the ability to create and edit geographic data. The bibliography of collected data is presented below.

## **SUMMARY OF DATA COLLECTED**

### **Pollutant Source Inventory**

#### Urban Point

1. Northwest Indiana bypasses - one LaPorte County incident (Excel file)
2. Map of Michigan City sewer system (paper copy)
3. *E. coli*, precipitation, outfall location, and other related data from the Michigan City Waste Water Treatment Plant (WWTP; Excel files)
4. Hard copies of National Pollutant Discharge Elimination System (NPDES) permits for facilities in Trail Creek Watershed, which include Shady Oak Mobile Court, Michigan City Water Infiltration Plant, J.B. Gifford WWTP, Indian Springs Subdivision, and Daphne Mobile Home Park (also see Attachment B list under EPA PCS database)
5. Indiana Department of Environmental Management (IDEM) water quality monitoring data (Excel file)
6. Final Report of LaPorte County Health Department (LPCHD) 104-3 b Watershed Grant, December 1999 through September 2000, Town of Trail Creek Sanitary Survey, ARN No. A305-9-99-272-0, which includes a listing of Trail Creek addresses where septic systems are used and select sanitary survey information (e.g., water well sampling data for *E. coli*, location and construction of septic system) for those addresses included in the survey.

#### Urban Nonpoint

1. List of registered yard waste composting facilities in LaPorte County (none in Trail Creek watershed; paper copy)
2. List of waste tire processors and storage facilities (none in Trail Creek watershed; paper copy)
3. List of Resource Conservation and Recovery Act (RCRA) permitted hazardous waste treatment, storage, and/or disposal facilities (none in Trail Creek watershed; paper copy)
4. Natural Resource Damage Assessment Settlement, Restoration Plan, for Waste, Inc. Landfill in LaPorte County (paper copy)

#### Rural Nonpoint

1. Current Confined Feeding Operations (CFOs) for LaPorte County (Excel file)
2. List of LaPorte County facilities permitted for land application of biosolids or

industrial waste products (paper copy)

3. Hard copies of land application permits in LaPorte County, which include City of Michigan City, Michigan City Sanitary District, Indiana Department of Transportation (IDOT), City of LaPorte, and Kingsford Heights Town Council
4. List of five active sites in LaPorte County where septage land application occurs (none in Trail Creek watershed; paper copy)
5. Theresa Wojkovich, Resource Conservationist, National Resource Conservation Service (NRCS), LaPorte County, United States Department of Agriculture (USDA) – agricultural activities in LaPorte County
6. Joanna Gibson, Indiana University-Purdue University Fort Wayne (IPFW), Geographic Information System (GIS) effort to correlate land use and water quality, Best Management Practices (BMP) assessment

## **Watershed Characteristics**

### General

1. IDEM Office of Water Quality web site contains many links to data sources for drinking water, water quality, watershed management, environmental assessment, combined sewer overflow, and NPDES, <http://www.in.gov/idem/water/data>
2. Northwest Indiana GIS Resources, Subject Listings & Related Internet Sites, [http://www.iun.edu/~lib/GIS\\_resources.htm](http://www.iun.edu/~lib/GIS_resources.htm). Access for geographic data and services through a global network of publishers is found using the link <http://www.geographynetwork.com/home.html>
3. *Trail Creek Watershed Management Plan* dated September 30, 1993, prepared by the Northwestern Indiana Regional Planning Commission under contract to IDEM

### Land Use/Land Cover

1. Paper copy aerial photograph (with photo index) of the Trail Creek Watershed from Northwestern Indiana Regional Planning Commission (Scale: 1"= 2000') that shows the following delineations:
  - 10 specific land use features (e.g., landfills, dairy farms)
  - urban or built up land use
  - pasture/cropland use
  - forest
2. Seventeen paper copy photographs of various Trail Creek segments and adjacent land uses taken during a site visit by Triad and TN & Associates on September 24, 2002

3. Database on LaPorte County soil in coverage/export format (no shape files available). Uncompressed or MrSID quarter quads available at <http://storage.iu.edu/DOQQS/> (20:1 compression target for MrSIDs). MrSIDs at a 10:1 compression target found at <http://danpatch.ecn.purdue.edu/~caagis/> (all four quarterquads packaged together in a single download file). Entire LaPorte County MrSID mosaics available at <http://lighthouse.nrcs.usda.gov/gateway/gatewayhome.html> (also includes soil, elevation, precipitation, and topo mosaics)
4. Lake Rim GIS website – <http://adamite.igs.indiana.edu/arcims/lrim/start.html>
5. Population density map (.jpg file; source is 1999 census data)
6. CD files related to infrastructure, geology, hydrology, and environmental conditions (see Attachment A)

#### Streamflow

1. Daily mean flow data for Trail Creek stations 4095380 (1994-2001) and 4095300 (1969-1994) (Excel file from USGS database)

#### Water Quality

1. LaPorte County Water Resources website – <http://pasture.ecn.purdue.edu/~frankenb/watershed/county/laporte/index.html>
2. IDEM report on *Water Quality Assessment for the Development of TMDLs for E. coli and Cyanide in Trail Creek, Michigan City, LaPorte County*, April 16, 2001 (paper copy)
3. LaPorte County Health Department data on West Branch Trail Creek field sampling (inorganic, *E. coli*, other; paper copy and on CD)
4. BASINS database yielded water quality information presented in Attachment B (collected by Hydroqual, Inc.)
5. USGS database yielded data on total and fecal coliform (until 1980), water temperature (1914-2001), and chloride (1914-2001; no *E. coli* data)
6. STORET database (modernized) yielded no current data for Trail Creek watershed
7. STORET database (legacy) yielded data for station HUC 04040001 until 1975 (no coliform data)

#### Best Management Practices

1. No apparent information at this time.

## **CONTRACT TASK 6**

Task 6 of the Master Agreement for Technical Services requires an assessment of the acceptability of data, material, and information relevant to the development of a Trail Creek TMDL for *E. coli*. The majority of information compiled and listed herein was obtained from governmental (i.e., municipal, state, federal) agencies and is assumed to have been developed and/or collected using the degree of care and skill that are exercised with accepted practices for the required professions. The sources for actual *E. coli* sampling data and the quality assurance/quality control procedures utilized by each source are the following:

<u>Data Source</u>	<u>QA/QC Procedures</u>
IDEM	<i>Quality Assurance Project Plan for Indiana Surface Water Quality Monitoring Programs</i> (June 1999)
LaPorte County Health Department	<i>Standard Operating Procedure for Recreational Water Collection and analysis of E. coli on Streams, Rivers, Lakes and Wastewater</i> (revised 3-99) – based on USEPA Method 1103.1 (a.k.a. 600/4-85-076)
Michigan City Sanitary District	<i>Standard Operating Procedure for Recreational Water Collection and analysis of E. coli on Streams, Rivers, Lakes and Wastewater</i> (revised 3-99) – based on USEPA Method 1103.1 (a.k.a. 600/4-85-076)
Indiana Department of Natural Resources	<i>Work and Quality Assurance Plan for the Non Point Source Monitoring Project of the Interagency Task Force on E. coli for the Indiana Lake Michigan Basin in Lake, Porter, and LaPorte Counties, Indiana</i> (revised December 12, 2000)
Interagency Task Force on <i>E. coli</i>	<i>Standard Operating Procedure for Recreational Water Collection and analysis of E. coli on Streams, Rivers, Lakes and Wastewater</i> (revised 3-99) – based on USEPA Method 1103.1 (a.k.a. 600/4-85-076)

Please note that Interagency Task Force data is a compilation of *E. coli* data from IDEM, the LaPorte County Health Department, and the Michigan City Sanitary District. The documents listed above are available from Triad at your request.

## **CONTRACT TASK 7**

Task 7 of the Master Agreement for Technical Services requires an assessment of the temporal and geographic extent of *E. coli* impairments to Trail Creek and an evaluation of whether there is sufficient data to support numerical analyses (i.e., watershed and water quality models) pursuant to Tasks 10 and 11. These assessments will be addressed in the preliminary *E. coli* data analysis report, which is currently being finalized by Triad, and during the conceptualization and initial development phases of the watershed model by Hydroqual, Inc.

Please contact me if you have any questions.

Sincerely,

TRIAD ENGINEERING INCORPORATED    TRIAD ENGINEERING INCORPORATED

Tina A. Reese  
Project Manager

David C. Nader, LPG, CGWP  
Hydrogeologist

### **Attachments**

c:     Andrew J. Thuman, P.E./Hydroqual, Inc.  
       Eugenia Naranjo/Hydroqual, Inc.

**ATTACHMENT A**  
**LIST OF INFORMATION ON CDS**

## **ATTACHMENT B**

### **LIST OF EPA STORET/PCS, USGS, AND BASINS INFORMATION**